

[40 minutes]

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Nagano Corporation manufactures two products, Product S and Product W. Product W is of fairly recent origin, having been developed as an attempt to enter a market closely related to that of Product S. Product W is the more complex of the two products, requiring one hour of direct labor time per unit to manufacture compared to half hour of direct labor time for Product S. Product W is produced on an automated production line.

Overhead is currently assigned to the products on the basis of direct-labor hours. The company estimated it would incur \$500,000 in manufacturing overhead costs and produce 60,000 units of Product S and 10,000 units of Product W during the current year. Unit cost for materials and direct

	Product S	Product W
Direct material	\$10.00	\$24.00
Direct labor	\$8.00	\$12.00

Required:

1.) Compute the predetermined overhead rate under the current method of allocation and determine the unit product cost of each product for the current year.

Total unit product cost

2.) The company's overhead costs can be attributed to many activities. Some of these activities and the amount of overhead cost attributable to each for the current year are given below:

Activity Cost Pools	Estimated Overhead Costs	Expected Activity	
		Product S	Product W
Machine setups required	\$120,000	720	252
Purchase orders issued	\$43,500	480	192
Machine-hours required	\$104,000	3,000	1,500
Maintenance requests issued	\$152,500	840	560

Using the data above and an activity-based costing approach, determine the unit product cost of each product for the current year.

	Product S	Product W
Total unit product cost	<input type="text"/>	<input type="text"/>

3) You decided to investigate the costs not assigned to any ABC cost pool. You were not able to assign any new cost pools but you found that the cost of the material handling department has not been assigned to any ABC cost pool. Product S has 10 components and Product W has 50 components. If you were able to identify the cost of the material handling department and allocate based on activities, which product's unit cost will increase from your answer to question 2 ?